



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Sandhu et al.

Serial No.: 10/637,108

Filed: August 8, 2003

For: LOW RESISTANCE CONTACT TO SILICON HAVING A TITANIUM SILICIDE INTERFACE AND AN AMORPHOUS TITANIUM CARBONIDTRIDE BARRIER

LAYER

Examiner: M. Lebentritt

Group Art Unit: 2824

Attorney Docket No.: 2269-3264.6US

(92-0280.09/US)

CERTIFICATE OF MAILING

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SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

In compliance with the duty to disclose information material to patentability pursuant to 37 C.F.R. § 1.56, it is respectfully requested that this Supplemental Information Disclosure Statement be entered and the documents listed on attached Form PTO-1449 or PTO/SB/08 be considered by the Examiner and made of record. The listed documents are from co-pending application Serial No. 10/637,107, filed August 8, 2003. Copies of the listed documents are enclosed pursuant to 37 C.F.R. § 1.98(a).

In accordance with 37 C.F.R. § 1.97(g) and (h), filing of this Supplemental Information Disclosure Statement is not to be construed as a representation that a search has been made or an admission that the information cited herein is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b). Further, no representation is made by Applicants herein that no other possible material information as defined in 37 C.F.R. § 1.56 (b) exists.

U.S. Patent Documents

U.S. Patent No.	Publication Date	<u>Patentee</u>
4,998,151	03/05/91	Korman et al.
5,242,860	09/07/93	Nulman et al.

Foreign Patent Documents

Document No.	Publication Date	<u>Patentee</u>
WO 86/01640	03/13/86	Dean

Other Documents

EIZENBERG et al., "TiCN: A new chemical vapor deposited contact barrier metallization for submicron devices", Appl. Phys. Lett. 65 (19), 7 November 1994, pps. 2416-2418.

Peng et al., "Properties of CVD-W Overgrowth on PVD and MOCVD TiN Layers, IEEE, 5th International Converence Proceeding on Solid-State and Integrated Circuit Technology, 1998, pps. 211-214.

Applicants offer to supply any explanation or discussion of the documents which the Examiner feels is necessary or desirable and which is requested.

This Supplemental Information Disclosure Statement is filed after the mailing date of the first Office Action on the merits.

I hereby certify that no item of information contained in the Supplemental Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of the statement, and therefore no fee is due.

Respectfully submitted,

James R. Duzan

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Date: April 6, 2004

JRD/sls:djp

Enclosures: Form PTO-1449 or PTO/SB/08

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Approved for use through 10/31/2002. OMB 0651-0031

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(use as many sheets as necessary)

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Complete if Known						
Application Number	10/637,108					
Filing Date	August 8, 2003					
First Named Inventor	Sandhu et al.					
Group Art Unit	2824					
Examiner Name	M. Lebentritt					
Attorney Docket Number	3264.6US (92-0280.09/US)					

U.S. PATENT DOCUMENTS							
Examiner Initials *	Cite No.		Document Number Number - Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
		US-4,998,151	03/05/91	Korman et al.			
		US- 5,242,860	09/07/93	Nulman et al.			
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FOREIGN PATENT DOCUMENTS								
Examiner Cite Initials* No.1	Cite	Foreign Patent Document		Name of Patentee or	Pages, Columns, Lines,			
	Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear	T ⁶			
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STATEMENT BY APPLICANT				First Named Inventor	Sandhu et al.	
				Group Art Unit	2824	
(use as many sheets as necessary)				Examiner Name	M. Lebentritt	
Sheet	2	οf	2	Attorney Docket Number	3264.6US (92-0280.09/US)	

	OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS					
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²			
		EIZENBERG et al., "TiCN: A new chemical vapor deposited contact barrier metallization for submicron devices", Appl. Phys. Lett. 65 (19), 7 November 1994, pps. 2416-2418.				
		Peng et al., "Properties of CVD-W Overgrowth on PVD and MOCVD TiN Layers, IEEE, 5 th International Converence Proceeding on Solid-State and Integrated Circuit Technology, 1998, pps. 211-214.				

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